



Diabetes Mellitus

Ann Arbor, MI

QUERI Fact Sheet

January 2006

QUERI currently focuses on ten conditions that are prevalent and high-risk among veteran patients: chronic heart failure, colorectal cancer, diabetes, HIV/ AIDS, ischemic heart disease, mental health, polytrauma and blast-related injuries, spinal cord injury, stroke, and substance use disorders.

Diabetes affects nearly 20% of veterans receiving care in the VA health care system and is a leading cause of micro-vascular complications, such as blindness, end stage renal disease, and amputation. Moreover, middle-aged persons with diabetes have two-to-four times the risk of coronary artery disease and stroke compared with similar persons without diabetes. VA is the largest integrated health care system in the U.S. providing care to people with diabetes. Patients with diabetes account for nearly 25% of all VA pharmacy costs and are responsible for more than 1.7 million hospital bed days of care annually.

The Diabetes Mellitus Quality Enhancement Research Initiative (DM-QUERI) was created to employ the QUERI 6-step process (see back page) to improve the quality of care and health outcomes of veterans with diabetes, and to produce information on disseminating and implementing practices that are deemed essential for effective diabetes care.

DM-QUERI Goals and Projects

The overall goal of DM-QUERI is to reduce rates of preventable morbidity and mortality among veterans with diabetes. Within this overarching goal, several specific priority areas have been identified and include:

- Optimizing the management of cardiovascular risk factors to prevent cardiovascular complications and mortality;

- Decreasing rates of other diabetes-related complications, with particular emphasis on prevention of visual loss and lower-extremity ulcers and amputation;
- Improving patient self-management; and
- Better care management of patients with diabetes and other chronic co-morbid conditions.

In addition, DM-QUERI is actively engaged in work to advance clinically meaningful quality and performance measurement both for directly promoting quality improvement and for assessing the results of quality improvement interventions. DM-QUERI conducts a diverse portfolio of projects to facilitate the implementation of research findings and evidence-based recommendations within routine clinical practice. The following projects are examples of how DM-QUERI is addressing the above priority areas.

Evaluation of a Coordinated Proactive Diabetes Eye Care Program

Evidence indicates that loss of vision due to diabetic retinopathy is largely preventable through early detection, careful follow-up of those with retinopathy, and optimally timed laser therapy. DM-QUERI is implementing and evaluating a coordinated eye care program that will: 1) employ a flexible scheduling system that assures priority scheduling for high-risk patients; 2) provide effective reminders to patients who need less frequent follow-up; 3) coordinate care and communication across multiple providers and clinics; and 4) improve information and record-keeping so that patients can be prioritized according to risk status.

Addressing Barriers to Translation for Treatment of Hypertension

Hypertension is related to a number of diabetes complications, yet clinicians often fail to change therapy when blood pressure is elevated. This study examines clinician, organizational and patient factors that may

The DM-QUERI Executive Committee

Each QUERI Executive Committee is co-chaired by a research expert and a clinician. The research coordinator for DM-QUERI is **Eve Kerr, MD, MPH**, and the clinical coordinator is **Leonard Pogach, MD**. This Executive Committee includes other experts in the field of diabetes mellitus: David Aron, MD, MS; Amy Butchart, MPH (Administrative Coordinator); Claude Cowan Jr., MD; Fran Cunningham, PharmD; Linda Haas, RN, CDE, PhD Candidate; **Mary Hogan, PhD, RN** (Co-Implementation Research Coordinator); Rodney Hayward, MD; Linda Kinsinger, MD, MPH; **Sarah Krein, PhD, RN**, (Co-Research Coordinator); **Julie Lowery, PhD**, (co-Implementation Research Coordinator); Michael J. Miller, MD, PhD; Gayle Reiber, PhD, MPH; Joseph Selby, MD, MPH; and Ruth Weinstock, MD, PhD.

contribute to this problem. The study will enroll clinicians and their patients who have an elevated blood pressure. Data are being collected through surveys, interviews, medical record reviews, and an organizational assessment. This systematic evaluation of barriers to translation should lead to targeting important factors amenable to clinical improvement efforts.

Impact of a Quality Initiative on Foot Care Outcomes

DM-QUERI research on foot care among patients with diabetes has produced insights into the gaps and potential solutions for improving the care for those at high risk for amputation. A survey of veterans with diabetes and a high-risk foot condition showed that about half fail to perform timely self-screening. A study of foot care and outcomes at VA sites found that coordination of care was associated with fewer amputations. A clinical trial is being proposed to evaluate the implementation of specific interventions to enhance care for persons with diabetes and high-risk foot conditions.

Additional DM-QUERI Research

Translating Research into Action for Diabetes in the VA (TRIAD-VA)

In the 1990s the VA instituted system-wide standards, integrated care, electronic records, and performance measurement programs. The TRIAD project – a collaboration between VA and the CDC – studied patients with diabetes from VA and managed care health plans in five geographic areas. The VA patients fared better than managed care patients on receiving appropriate care and on two of three outcomes. This study suggests that VA system-wide changes have led to care as good as or better than managed care plans.

Influence of Chronic Pain on Diabetes Care and Self-Management

In a preliminary study, DM-QUERI found that 60% of veterans with diabetes reported chronic pain, which was associated with poorer self-management and more difficulty with some self-care. A VA study using nationwide samples of patients and clinicians is underway to further understand the presence and treatment of chronic pain among patients with diabetes. QUERI investigators are collecting data from patient and clinician surveys and medical records to determine care received and outcomes.

Stroke Prevention, Incidence and Outcomes

Often stroke causes significant disability, and persons with diabetes have a 2 to 4 fold greater risk of stroke than others. This study uses medical record review and a database linking VA care with Medicare financed care provided outside VHA to understand the epidemiology of stroke, process of care, utilization, and outcomes among VHA users with diabetes. Results will allow us to better understand the epidemiology of stroke in veterans with diabetes, and potential gaps in care that might be addressed in service delivery systems.

THE QUERI PROCESS

The QUERI process includes six steps:

- 1)** identify high-risk/high volume diseases or problems;
- 2)** identify best practices;
- 3)** define existing practice patterns and outcomes across VA and current variation from best practices;
- 4)** identify and implement interventions to promote best practices;
- 5)** document that best practices improve outcomes; and
- 6)** document that outcomes are associated with improved health-related quality of life.

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**VA's Research and Development QUERI Web site: www.hsrdr.research.va.gov/queri
DM-QUERI direct weblink: www.va.gov/annarbor-hsrd/queri/queri_index.htm**